

## WhatSurdo: A Strategy to Simulate the Real Communicational World in Low Income Schools

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### Abstract

WhatSurdo is a didactical material for stimulating writing and reading by simulating cell phone interaction in a dynamic way. It involves a 2D-representation of an instant messaging application, WhatsApp, simulating the reality of those who use it to communicate. Due to this stimulation that allows the students active participation in a practical (typing/writing adding figures/making draws) and theoretical (Language grammar) learning perspectives, it permits not only repetition but also thinking, feedback and assessment. This technology simulation was tested with four deaf students to evaluate its inclusive and stimulatory features. Whatsurdo has potential to help teachers to teach language to kids at different ages, including those with special needs and particularly those of low income schools and/or without contact with this kind of technology.

### Introduction

According to data provided by some of major social networks and cell phone applicatives, Facebook and WhatsApp respectively, these technologies have been widely used for communication worldwide. This scenario is due to the emergence and accessibility of mobile phones and the lowering of the cost of purchasing them as well as buying new computers. People interact in all different levels of relationships from friendship to married distance status using some of these tools (BURKE et al, 2011, ELLISON et al, 2014, WhatsApp Inc, 2015).

As they enable an intense exchange of written dialogues, virtual environments and social networks have become useful not only for communication but also for practicing and learning new languages (ARCOVERDE, 2006; CHEUNGA et al., 2011).

Currently Whatsapp is an easy-to-use instant messaging application that employs not only words but also symbols representing different expressions and emotions. This offers a relaxed and clear conversation environment without the rigidity that remains when using formal grammar and well-written texts (WhatsApp Inc, 2015).

Studies involving the evaluation of these digital resources as teaching tools have been described (KLOPFER et al., 2009). However the creation and application of simulation strategies regarding these tools is still in need for those students of low income schools. New simulation strategies may

allow these students to understand the experience of communicating through a cell phone messaging application as well as serve as a stimulatory environment for writing for them.

It is important to notice that lots of schools in developing countries and even some in developed countries has no computer laboratory attending their students. In addition, most kids under 9 years old have no cell phone to work with or use at school. Thus planning on strategies that simulate using these virtual environments may help on teaching this public in a playful and fun way.

## **Method**

### *Subjects*

In order to verify the inclusion feature of the didactical material, we tested it with deaf students of the support classroom of a low income public school. Therefore, in order to meet the ethical requirements of a research involving human subjects, the project was submitted and approved by the Ethics Committee of the Universidade Federal Fluminense - CEP / FF under the CAAE number: 47645815.7.0000.5243 (ANNEX 1).

The subjects were four deaf students (3 females and 1 male, 15-18 years) from a school at Rio de Janeiro state. According to the subjects, the first contact with sign language occurred at school, through interaction with their peers and interpreters as they are from hearing families who do not know sign language. Therefore they learn sign language first and then the writing form of the Brazilian language (Portuguese), which they were not fluent.

### *The Didactical Material Preparation*

First we performed a meeting with students and their parents explaining clearly the objective of the research. After clarifying their doubts, we asked those with eighteen years old or higher and those responsible for minors to sign the Informed Consent Form. Students between fourteen and sixteen years old (14-16 years) were also asked to sign the consent term.

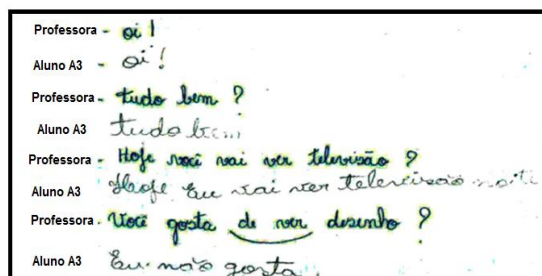
Considering the ethical aspects of research, we assured anonymity to the participants. It was also requested authorization to show and analyze the written dialogues to reveal the effects of using this strategy.

## **Results and Discussion**

First, we did an explanation in sign language to the four deaf students informing on how the activity would be carried out. Interestingly it was immediately observed that the students were pretty excited, saying that with this activity they could talk with hearing students as they would learn how to use Whatsapp.

We used plain white paper for the first dialogues, which were mediated by a teacher that knows sign language. Figure 1 shows some of the simulated Whatsapp conversations between teacher and students A1-3 (Figure 1).

A)



B)

STUDENT A3

STUDENT A2

**Teacher:** Good morning!

**Teacher:** Today is November 19 of two thousand fourteen.

**Student A3:** Good morning!

Today I will explain subtraction and addition in fractions. Understood?

**Teacher:** Did you sleep well tonight?

**Student A2:** I do not know word EXPLAIN, addition, fractions

**Student A3:** Not KNOW THAT (pointing word tonight)

**Teacher:** I 'll make the sign and you look at me. OK? I did the sign of word EXPLAIN. Did You understand?

**Teacher:** Tonight = last night (yesterday). Understood?

**Student A2:** Yes I known

**Student A3:** Yes I understood

**Teacher:** Do not write I known. Writes I got it. Understood?

**Teacher:** I see.

**Student A2:** Today I got it.

Did you sleep well tonight?

**Student A3:** Yes I slept well

**Teacher:** Right. But there is (has) a difference (different) of TODAY and NOW words. Today may be any time of a day. Now is at this very moment.

**Teacher:** Do you understand the question?

Verb understand

**Student A3:** Yes I understood

I-> did I understand

**Teacher:** Right.

You-> did you understand

Question: Do you understand?

He-> did he understand

**Student A3:** I understand.

**Teacher:** Did you sleep?

**Student A3:** I slept.

Figure 1: Dialogues on Whatsapp style. A) One of the first original dialogues in plain paper of student A1 in Portuguese. B) Translation of dialogues from Students A3 and A2 with the bilingual teacher.

We noticed that the dialogues were getting more complex and they were more interested on knowing more words. From that moment, systematic classical exercises were left aside and we started to use this kind of activity to work with their second language, Portuguese.

Interestingly, even without having using the virtual environment, the activity stimulated the interest of students. Apparently they noticed a good purpose to go to the classroom, to learn to communicate through “Whatsapp”, rather than learning words and more words in the traditional way that did not make sense for them or had no practical use in their personal lives.

Despite the activities were initiated through the plain paper aiming to teach Portuguese with the theoretical purpose of preparing the deaf to use social network/apps, these students were so excited that spread about it through the school. Interestingly, although not a real virtual environment, the news about teaching how to use Whatsapp stimulated other deaf students who were not registered or barely went class, to go to class and learn how to communicate through writing (Figure 2). Therefore, it was noticed a significant increase in the frequency of deaf students in the support classroom (Figure 2).

We noticed that even without using real technological resources to perform the dialogues, deaf students were often interested in learning during this activity. Therefore, despite the technologies regarding virtual social networks were attractive, the use of a simple simulation such as a white plain paper, make them interest in written Portuguese, turning the purpose (ability of using a social networks) more important than the immediate access to the technology itself.

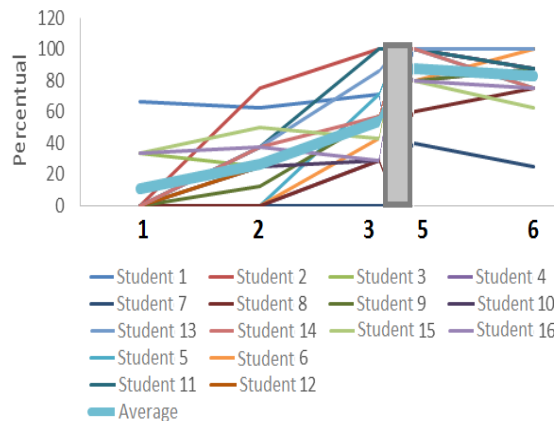


Figure 2: Frequency of deaf students on the support classroom during the five months using Whatsapp-stimulating-strategy for teaching Portuguese. The analysis revealed an overall increase of frequency of these students in the classroom (Average – thicker blue line). The gray bar marks scholar vacations in fourth month.

Based on this experience we created a print of a cell phone with the applicative Whatsapp “installed” to simulate conversations at school. Therefore the students may write on the spaces with their pencil and exchange messages in the classroom simulating using Whatsapp including with using the emojis, by drawing them with their pencils (Figure 3).

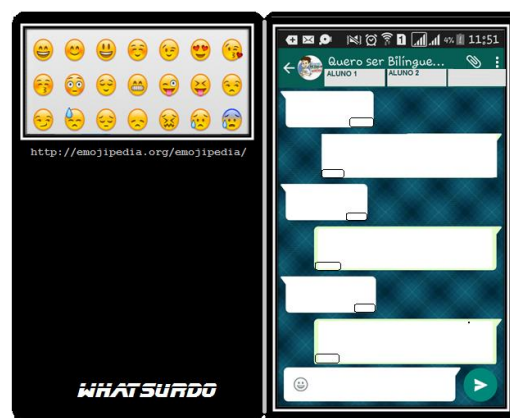
Our result with this work points to the simulation of using social networks as an alternative to teach writing language in school that has no computer with internet to use. Our use of this simulation strategy, turned the school in "a space of transformation", in which practices that take into account the specificities of the deaf students such as the use of technological resources for learning helped them to have a better written language, being successful.

The questions that motivated this research about the use of social networks/applicatives to stimulate the interest of the deaf for reading and writing in Portuguese as well as the results described herein are in accord to Silva and Favorite (2008) "In order to the deaf students understand the mechanisms of writing, they must be immersed in a language environment that enables them to experience this "work" with the language and understand this dynamic aspect of language ... " These authors suggested that deaf will develop the communication in written form when they see a applicable purpose.

We noticed in our work that this simulated environment could be the "new social interaction space" cited by Arcoverde (2006). In our context the virtual space of the social networking was transferred to the simulated space of the white plain paper. Thus we noticed that the simulation of social networks even in a so smaller and simple scale really stimulated learning in a natural way, without impositions for the deaf student.

## Final Considerations

According to our data herein, the most important for teaching the deaf students was not the social network/applicative per se but the utility of learning a second language clearly understood by applying the simulated activity. The possibility of interaction called attention of deaf students due to the engaging way of learning, revealing our simple strategy as an alternative to stimulate their interest in learning a second language in a low income environment. Our work suggested that the understanding of the clear purpose is still the most important issue for stimulating this new generation of students.



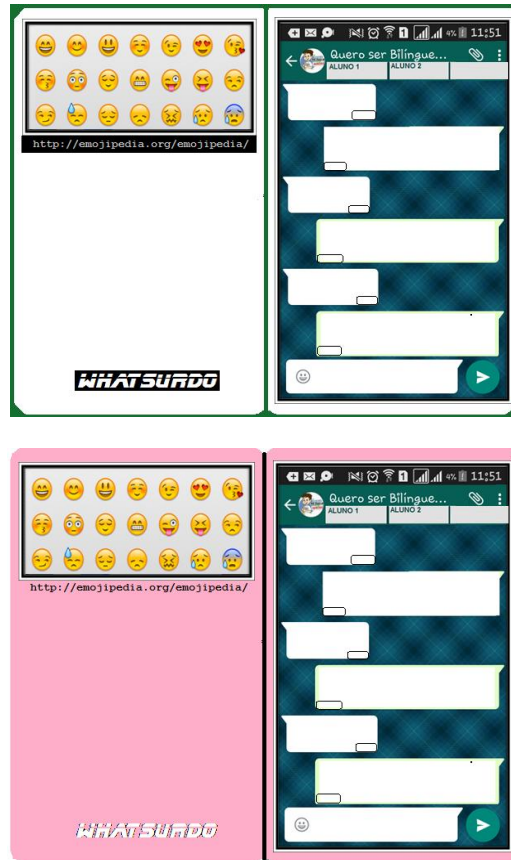


Figure 3: Print of virtual Cell phone called WhatSurdo to simulate Whatsapp environment. This printed sheet is to be used as stimulus for writing mainly at schools without computer laboratory. Versions in three colours (black, white and pink) showing back and front to be folded. They present a local to write the name of two to three persons and time-of-sending-the-message allowing simulation with a close-to-real perspective.

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